IN THE CLAIMS:

Please amend claims 1-18, 20-21, 24 and 26, and add new claims 31-33, as follows:

1. (Currently Amended) A method of administering chemotherapy, comprising:

administering ~~use of~~ a first agent that attenuates Topoisomerase II (Topo II) activity; and

administering a second agent that inhibits Heat Shock Protein 90 (HSP90) activity, ~~in the manufacture of a medicament for~~

wherein the first agent and the second agent are administered either contemporaneously or sequentially, and ~~contemporaneous or sequential administration in chemotherapy wherein~~ the first agent is selected from the group consisting of~~:~~ a Podophyllotoxin and derivatives and analogues thereof~~;~~, an Anthracenedione and derivatives and analogues thereof~~;~~, m-AMSA (amsacrine) and derivatives and analogues thereof~~;~~, a Bisdioxopiperazine and derivatives and analogues thereof~~.~~, a thiobarbiturate, Genistein and derivatives or analogues thereof~~; or~~, and Pyrazoloacridine and derivatives or analogues thereof.

2. (Currently Amended) The method of ~~use according to~~ claim 1 wherein the first agent is a compound selected from the group consisting of:

(i) compounds that bind to Topo II and inhibit its activity, including ~~(e.g.~~ competitive inhibitors and ~~or~~ allosteric inhibitors~~)~~;

(ii) compounds which prevent the transcription, translation or expression of Topo II, including ~~(e.g.~~ ribozymes and ~~or~~ antisense DNA molecules~~)~~;

(iii) compounds which inhibit release of Topo II from intracellular stores; and

(iv) compounds which increase the rate of degradation of Topo II.

3. (Currently Amended) The method of ~~use according to~~ claim 1 ~~or 2~~ wherein the first agent is ~~a Podophyllotoxin and derivatives and analogues thereof and is~~ selected from the group consisting of etoposide (VP16) and ~~or~~ teniposide.

4. (Currently Amended) The method of ~~use according to~~ claim 1 ~~or 2~~ wherein the first agent is ~~the~~ Anthracenedione Mitoxantrone.

5. (Currently Amended) The method of ~~use according to~~ claim 1 ~~or 2~~ wherein the first agent ~~a Bisdioxopiperazine and derivatives and analogues thereof and~~ is selected from the group consisting of ICRF-154, 159, 187 or 193.

6. (Currently Amended) The method of ~~use according to~~ claim 1 ~~or 2~~ wherein the first agent is the thiobarbiturate Merbarone or a derivative or analogue thereof.

7. (Currently Amended) The method of ~~use according to any preceding~~ claim 1 wherein the second agent is a compound selected from the group consisting of:

(i) compounds that bind to Hsp90 and inhibit its activity, including ~~(e.g.~~ competitive inhibitors and ~~or~~ allosteric inhibitors~~);~~,

(ii) compounds which prevent the transcription, translation or expression of Hsp90, including ~~(e.g.~~ ribozymes and ~~or~~ antisense DNA molecules~~);~~,

(iii) compounds which inhibit release of Hsp90 from intracellular stores~~;~~, and

(iv) compounds which increase the rate of degradation of Hsp90.

8. (Currently Amended) The method of ~~use according to~~ claim 7 wherein the second agent is Geldanamycin or a derivative or analogue thereof.

9. (Currently Amended) The method of ~~use according to~~ claim 8 wherein the second agent is 17-Allylamino, 17-demethoxygeldanamycin (17AAG).

10. (Currently Amended) The method of ~~use according to~~ claim 7 wherein the second agent is Radicicol or a derivative or analogue thereof.

11. (Currently Amended) The method of ~~use according to any preceding~~ claim 1 wherein the

chemotherapy is for cancer treatment.

12. (Currently Amended) The method of ~~use according to~~ claim 11 wherein the chemotherapy is for the treatment of solid tumours.

13. (Currently Amended) The method of ~~use according to~~ claim 12 wherein the chemotherapy is for the treatment of bowel cancer, small cell and non-small cell lung cancer, head and neck cancer, breast cancer, bladder cancer or malignant melanoma.

14. (Currently Amended) The method of ~~use according to~~ claim 11 wherein the chemotherapy is for the treatment of paediatric tumours.

15. (Currently Amended) The method of ~~use according to~~ claim 14 wherein the chemotherapy is for the treatment of neuroblastoma, leukaemias and lymphomas.

16. (Currently Amended) The method of ~~use according to~~ claim 11 wherein the first agent is etoposide and the chemotherapy ~~it~~ is used in the treatment of cancers selected from the group consisting of: Adult Acute Myeloid Leukemia, Adult Hodgkin's Disease, Adult Non-Hodgkin's Lymphoma, AIDS-Related Lymphoma, Carcinoma of Unknown Primary, Childhood Acute Myeloid Leukemia, Childhood Brain Tumor, Childhood Cerebral Astrocytoma, Childhood Ependymoma, Childhood Hodgkin's Disease, Childhood Liver Cancer, Childhood Medulloblastoma, Childhood Non-Hodgkin's Lymphoma, Childhood Rhabdomyosarcoma, Childhood Supratentorial Primitive Neuroectodermal and Pineal Tumors, Childhood Visual Pathway and Hypothalamic Glioma, Endometrial Cancer, Ewing's Family of Tumors Including Primitive Neuroectodermal Tumor (PNET), Extragonadal Germ Cell Tumors, Gastric Cancer, Gastrointestinal Carcinoid Tumor, Gestational Trophoblastic Tumor, Kaposi's Sarcoma, Malignant Thymoma, Neuroblastoma, Non-small Cell Lung Cancer, Osteosarcoma/Malignant Fibrous Histiocytoma of Bone, Ovarian Epithelial Cancer, Ovarian Germ Cell Tumor, Pediatric Extracranial Germ Cell Tumor, Prostate Cancer, Retinoblastoma, Small Cell Lung Cancer, Testicular Cancer,

Unusual Cancers of Childhood, and Wilms' Tumor and Other Childhood Kidney Tumors.

17. (Currently Amended) The method of claim ~~use according to any one of claims~~ 1 ~~–10~~ wherein the chemotherapy is for: antibacterial treatments~~;~~, antifungal treatments~~;~~, the treatment of AIDS/HIV~~;~~, the treatment of multiple sclerosis~~;~~, or the killing and inhibition of proliferation of any organism.

18. (Currently Amended) The method of claim 1 ~~use according to any preceding claim~~ wherein the chemotherapy is for prophylactic treatment.

19. (Original) A delivery system for use in a gene therapy technique, said delivery system comprising:

(i) a first DNA molecule encoding for a protein which directly or indirectly attenuates Topoisomerase II activity; and

(ii) a second DNA molecule encoding for a protein which directly or indirectly inhibits Heat Shock Protein 90 activity;

wherein said DNA molecules are capable of being transcribed to allow the expression of said proteins and thereby be effective for chemotherapy.

20. (Currently Amended) The ~~use of a~~ delivery system according to claim 19 configured for ~~the manufacture of a medicament for~~ use in chemotherapy.

21. (Currently Amended) The delivery system of ~~use according to~~ claim 20 ~~for the treatment of conditions defined by any one of claims 11 to 18~~ wherein the chemotherapy is for cancer treatment; the treatment of solid tumors; the treatment of bowel cancer, small cell and non-small cell lung cancer, head and neck cancer, breast cancer, bladder cancer or malignant melanoma; the treatment of paediatric tumours; the treatment of neuroblastoma, leukaemias and lymphomas; the treatment of Adult Acute Myeloid Leukemia, Adult Hodgkin's Disease, Adult Non-Hodgkin's Lymphoma, AIDS-Related Lymphoma, Carcinoma of Unknown Primary, Childhood Acute Myeloid Leukemia, Childhood Brain Tumor, Childhood Cerebral

Astrocytoma, Childhood Ependymoma, Childhood Hodgkin's Disease, Childhood Liver Cancer, Childhood Medulloblastoma, Childhood Non-Hodgkin's Lymphoma, Childhood Rhabdomyosarcoma, Childhood Supratentorial Primitive Neuroectodermal and Pineal Tumors, Childhood Visual Pathway and Hypothalamic Glioma, Endometrial Cancer, Ewing's Family of Tumors Including Primitive Neuroectodermal Tumor (PNET) , Extragonadal Germ Cell Tumors, Gastric Cancer, Gastrointestinal Carcinoid Tumor, Gestational Trophoblastic Tumor, Kaposi's Sarcoma, Malignant Thymoma, Neuroblastoma, Non-small Cell Lung Cancer, Osteosarcoma/Malignant Fibrous Histiocytoma of Bone, Ovarian Epithelial Cancer, Ovarian Germ Cell Tumor, Pediatric Extracranial Germ Cell Tumor, Prostate Cancer, Retinoblastoma, Small Cell Lung Cancer, Testicular Cancer, Unusual Cancers of Childhood, and Wilms' Tumor and Other Childhood Kidney Tumors; antibacterial treatments; antifungal treatments; the treatment of AIDS/HIV; the treatment of multiple sclerosis; the killing and inhibition of proliferation of any organism; and for prophylactic treatment.

22. (Original) A method of screening a first and a second compound, to test whether or not said compounds has efficacy for use in combination as a chemotherapy, comprising:

(a) exposing said compounds to Topoisomerase II and evaluating whether or not said compounds bind thereto;

(b) exposing said compounds to Heatshock Protein 90 and evaluating whether or not said compounds bind thereto; and

(c) selecting a first and second compound, wherein at least one compound binds to Topoisomerase II and at least one compound binds to Heatshock Protein 90 for use in combination as a chemotherapy.

23. (Original) A method of screening compounds, to test whether or not said compounds have efficacy for use in chemotherapy, comprising:

(a) exposing said compounds to Topoisomerase II and evaluating whether or not said compounds bind thereto;

(b) exposing said compounds to Heatshock Protein 90 and evaluating whether or not said compounds bind thereto; and

(c) selecting compounds that bind to Topoisomerase II and to Heatshock Protein 90 for use in chemotherapy.

24. (Currently Amended) The method according to claim 22 ~~or 23~~ wherein the compound is screened using Topoisomerase II and Heatshock Protein 90 as binding partners in an interaction trap and evaluating whether or not said compound modulates binding.

25. (Original) The method according to claim 24 wherein the interaction trap is a yeast two-hybrid interaction trap.

26. (Currently Amended) The method according to claim 25 wherein yeast used in the ~~interact~~ interaction trap are permeable to the tested compounds.

27. (Original) A method of screening a compound, to test whether or not said compound is carcinogenic, comprising exposing said compound to Topoisomerase II and Heatshock Protein 90 to evaluate whether or not said compound promotes interaction between Topoisomerase II and Heatshock Protein 90.

28. (Original) An *in vitro* method for diagnosing whether or not a subject has, or is likely to develop cancer, comprising:

(i) detecting the level of activity or expression levels of HSP90 and Topoisomerase II from a sample of cells from said subject; and

(ii) comparing the level of activity or expression levels of HSP90 and Topoisomerase II in said sample relative to activity expression levels of HSP90 and Topoisomerase II from a non-cancerous sample.

29. (Original) An *in vitro* method for evaluating the suitability of chemotherapeutic treatment for administration to a subject, comprising:

(i) detecting the level of activity or expression levels of HSP90 and Topoisomerase II from a sample of cells from said subject; and

(ii) comparing the level of activity or expression levels of HSP90 and Topoisomerase II in said sample relative to activity expression levels of HSP90 and Topoisomerase II from a non-cancerous sample.

30. (Original) An *in vitro* method for monitoring the effectiveness of a chemotherapy for treating a subject, comprising:

(i) detecting the level of activity or expression levels of HSP90 and Topoisomerase II from a sample of cells from said subject; and

(ii) comparing the level of activity or expression levels of HSP90 and Topoisomerase II in said sample relative to activity expression levels of HSP90 and Topoisomerase II from a non-cancerous sample.

31. (New) The method according to claim 23 wherein the compound is screened using Topoisomerase II and Heatshock Protein 90 as binding partners in an interaction trap and evaluating whether or not said compound modulates binding.

32. (New) The method according to claim 31 wherein the interaction trap is a yeast two-hybrid interaction trap.

33. (New) The method according to claim 32 wherein yeast used in the interaction trap are permeable to the tested compounds.